

FIG. 8

—— Working
 ----- Protection

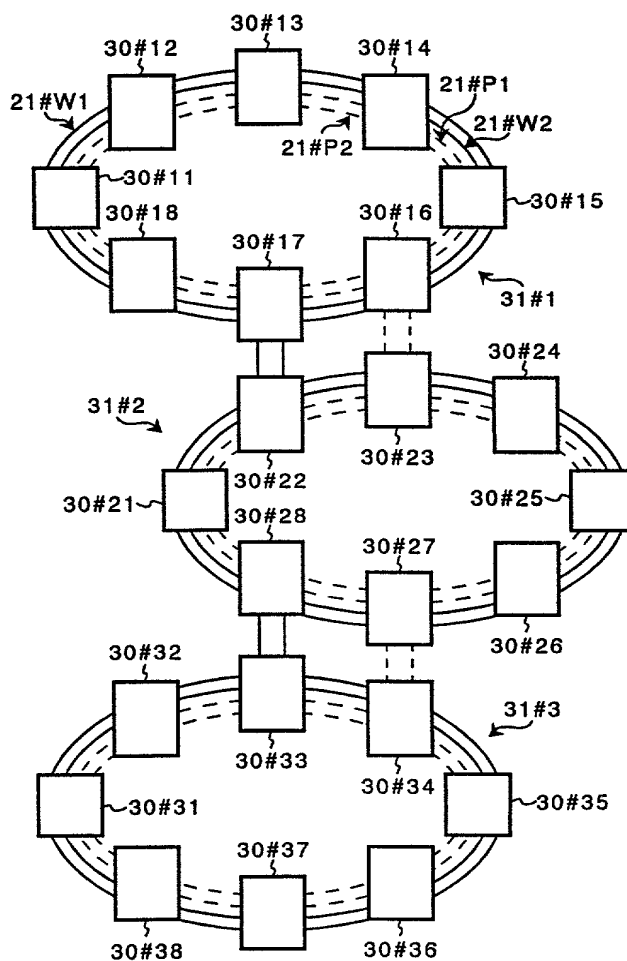
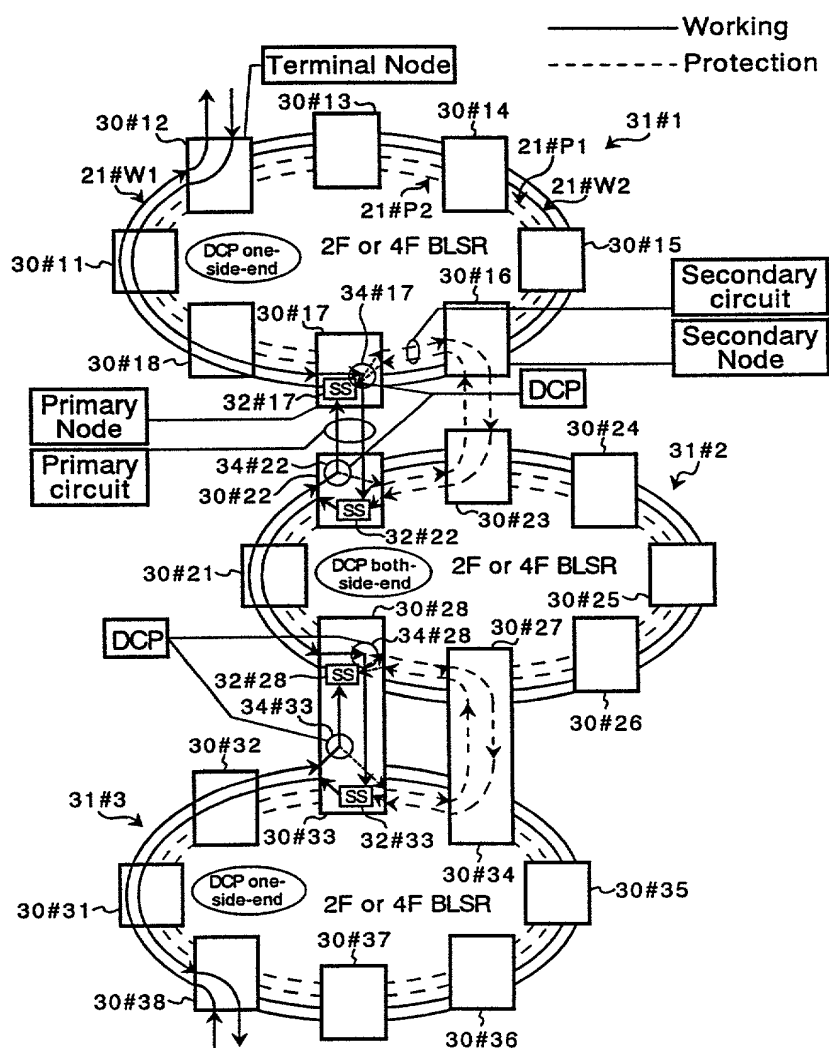


FIG. 9



106020" 55013/60

FIG. 10

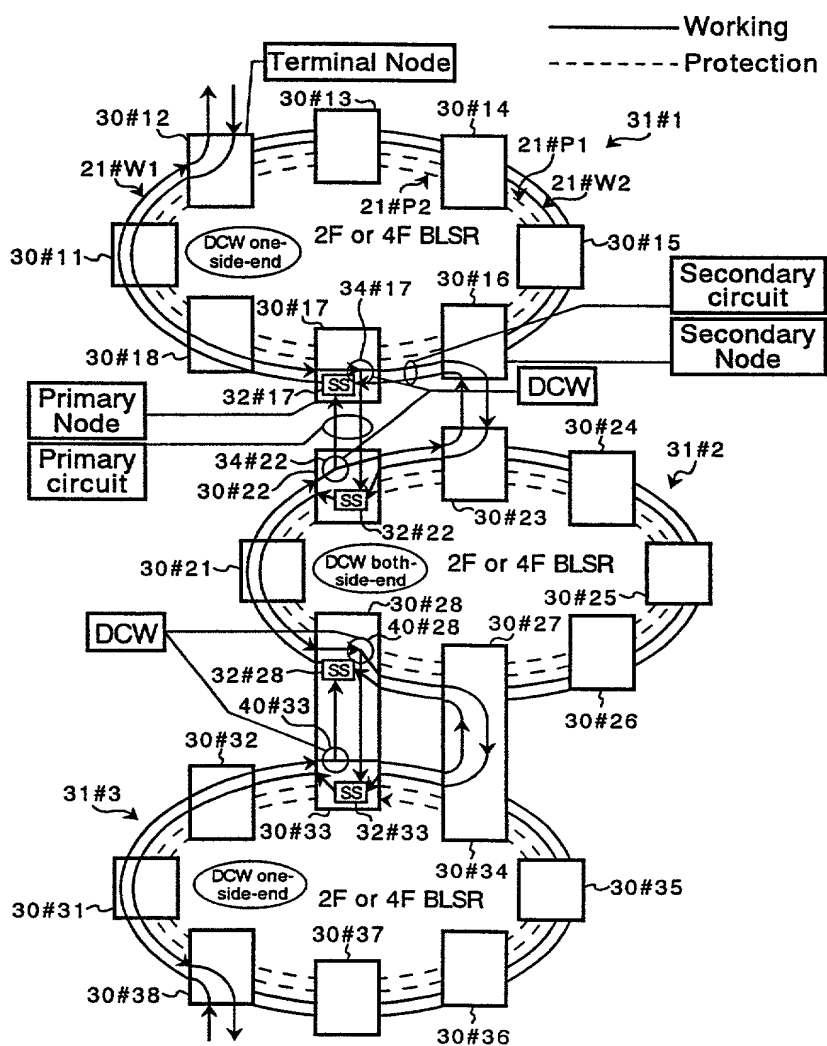


FIG. 11

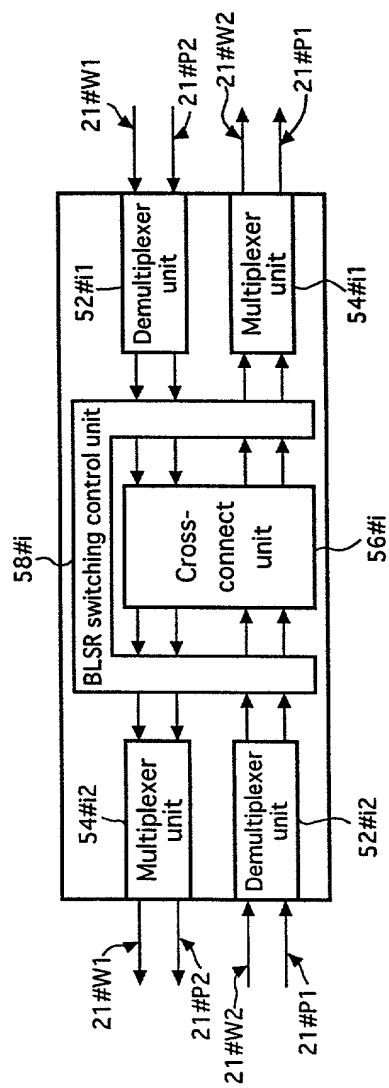


FIG. 12

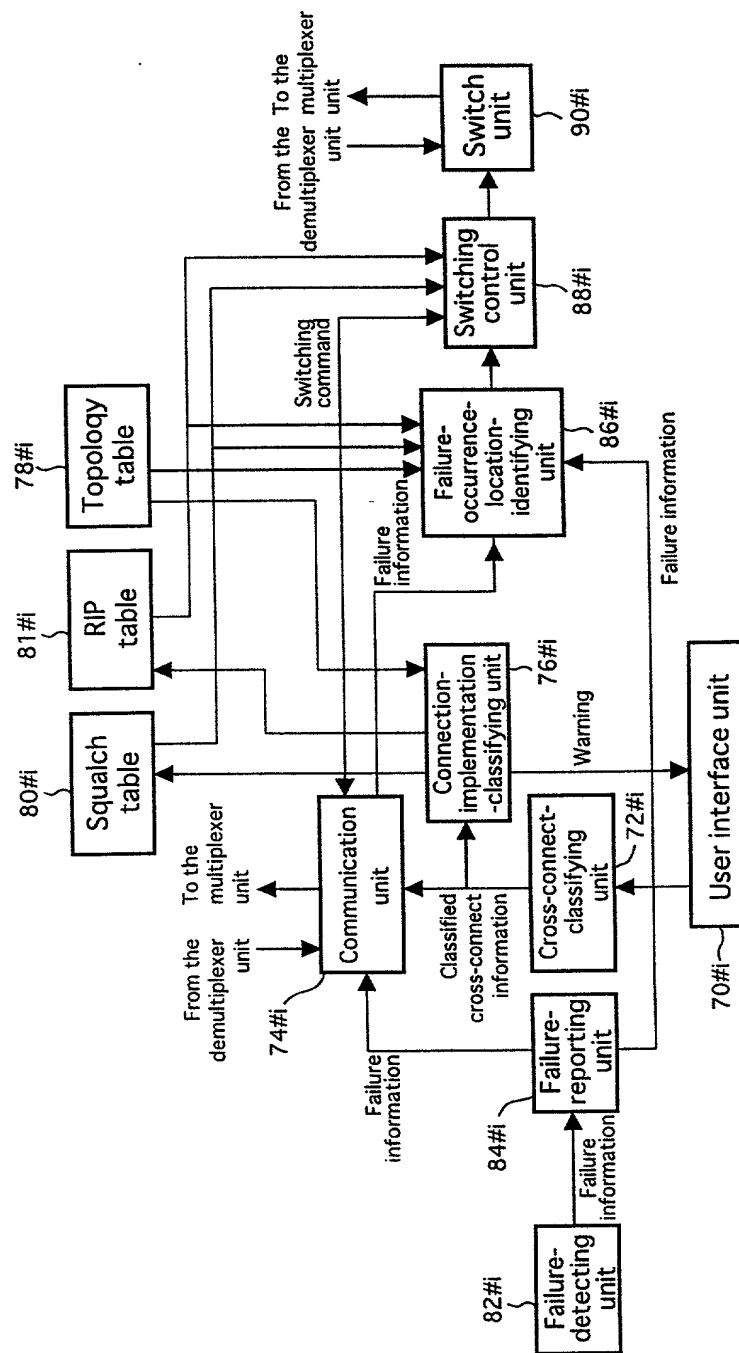


FIG. 13

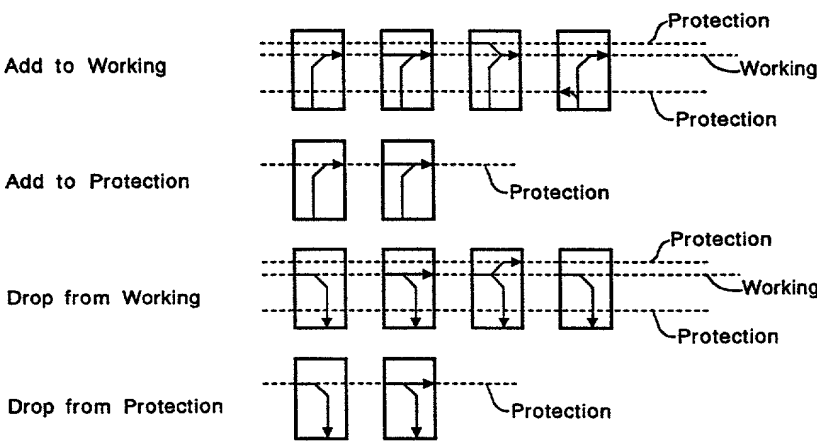


FIG. 14

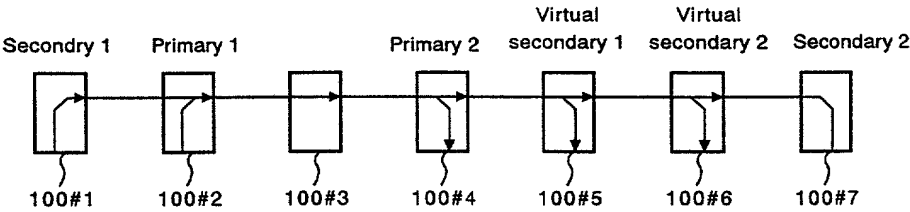
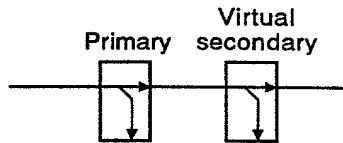


FIG. 15

A case in which 2 consecutive intermediate stations drop a signal in the east direction sequentially



Data of the second and subsequent intermediate stations is not collected.

FIG. 16

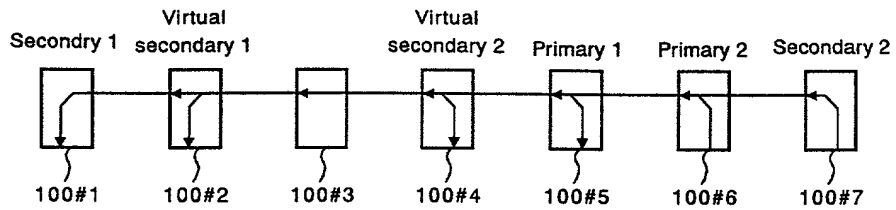
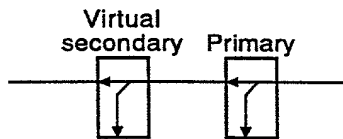


FIG. 17

A case in which 2 consecutive intermediate stations drop a signal in the west direction sequentially



Data of the second intermediate stations is overwritten by data of this station.

FIG. 18A

A case in which an intermediate station drops a signal and the next intermediate station adds a signal, or an intermediate station adds a signal and the next intermediate station drops a signal

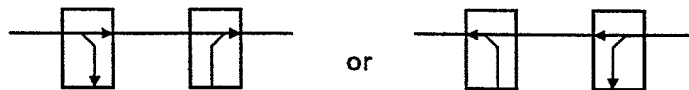


FIG. 18B

A case in which 2 consecutive intermediate stations add a signal sequentially

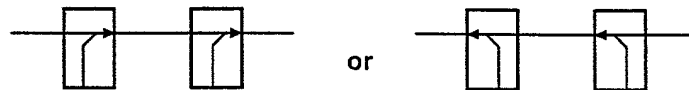


FIG. 18C

A case in which all stations along a transmission line respectively adds, drops, adds and drops a signal sequentially, or drops, adds, drops and adds a signal sequentially.

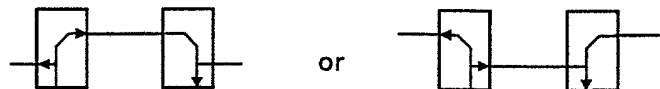


FIG. 19

Normal add/drop or DTW

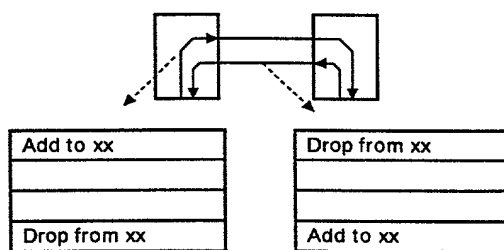


FIG. 20

DCP one-side-end

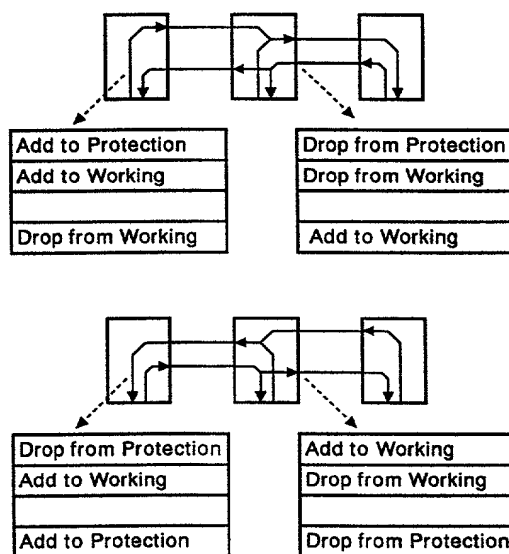


FIG. 21

DCW one-side-end

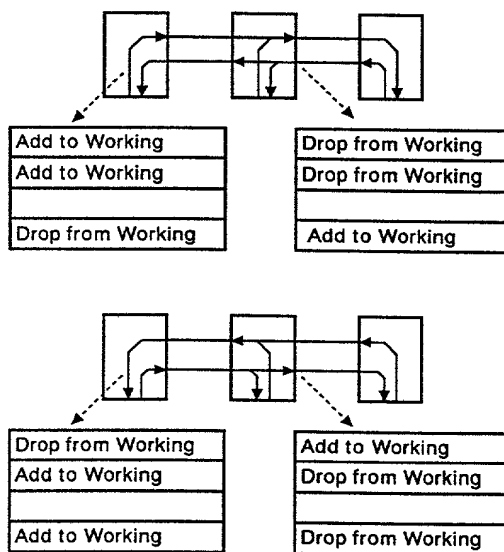


FIG. 22

DTP one-side-end

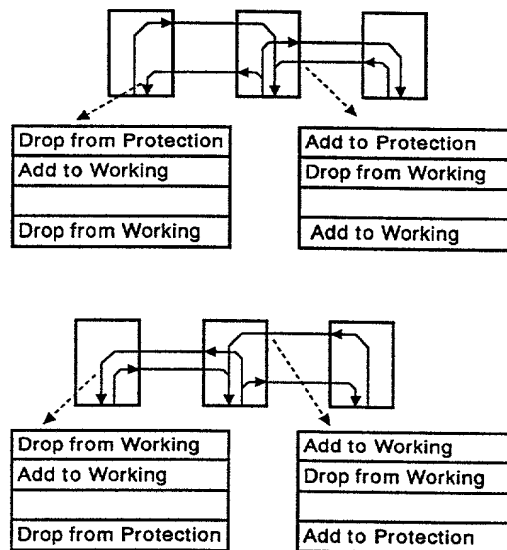


FIG. 23

DCP both-side-end

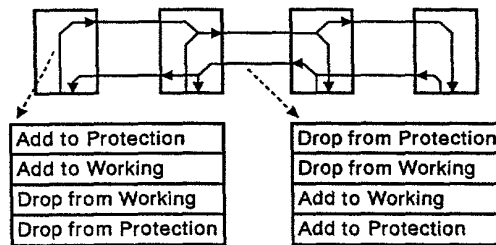


FIG. 24

DCW both-side-end

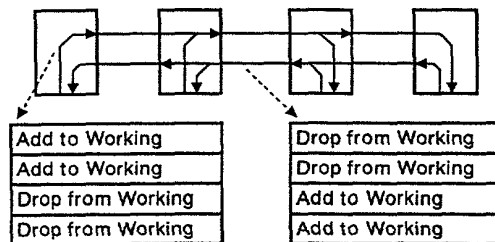


FIG. 25

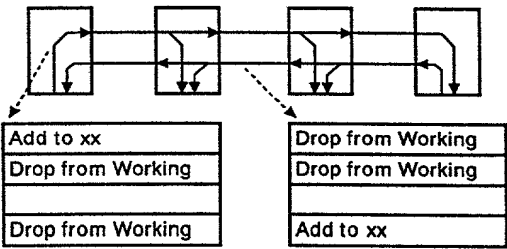


FIG. 26

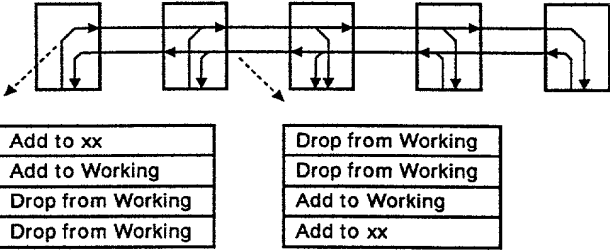
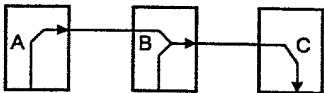


FIG. 27

For example, the following cross connect:



Collected data indicates a DCP connection as follows:

Cross-connect category	ID
Add to Protection	A
Add to Working	B
Drop from Protection	C

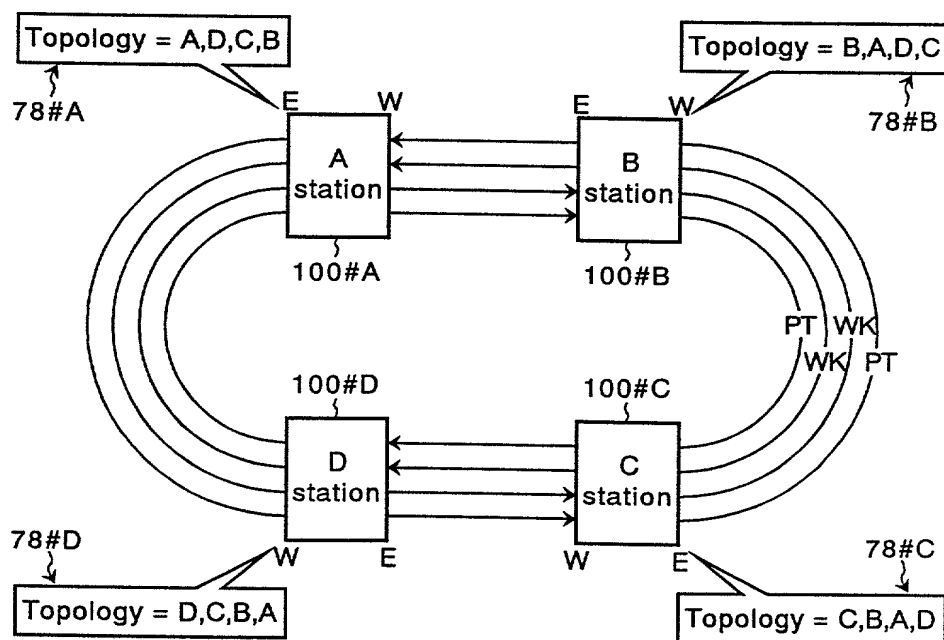


FIG. 29

CH#						
			East		West	
CH#1	Add					
	Drop					
⋮						
CH#n	Add					
	Drop					

80#i

FIG. 30

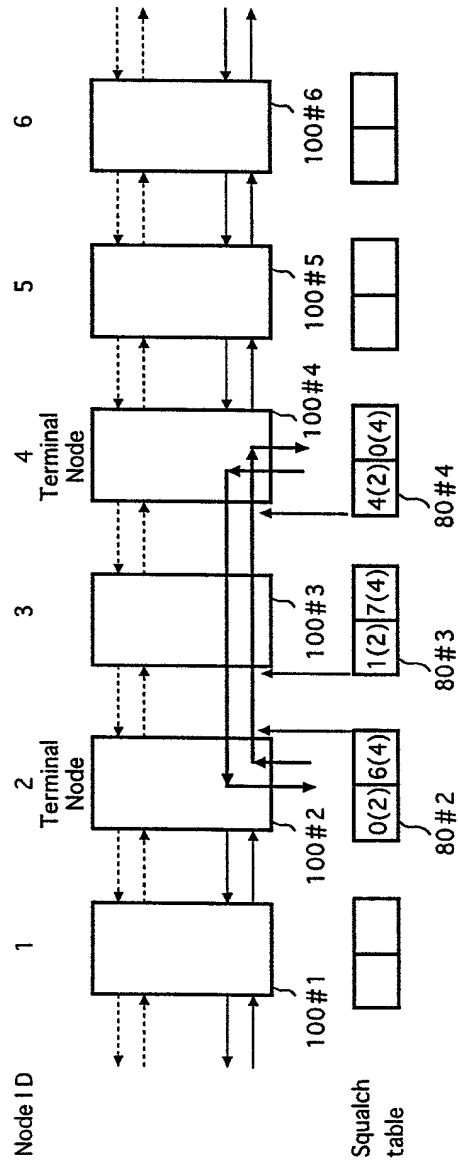


FIG. 31

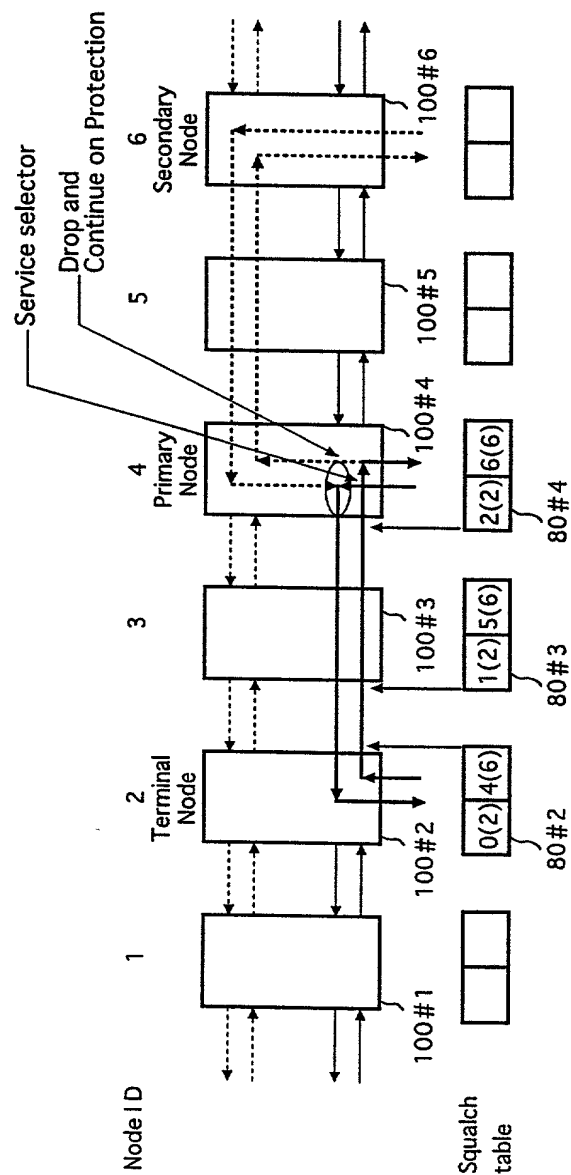


FIG. 32A

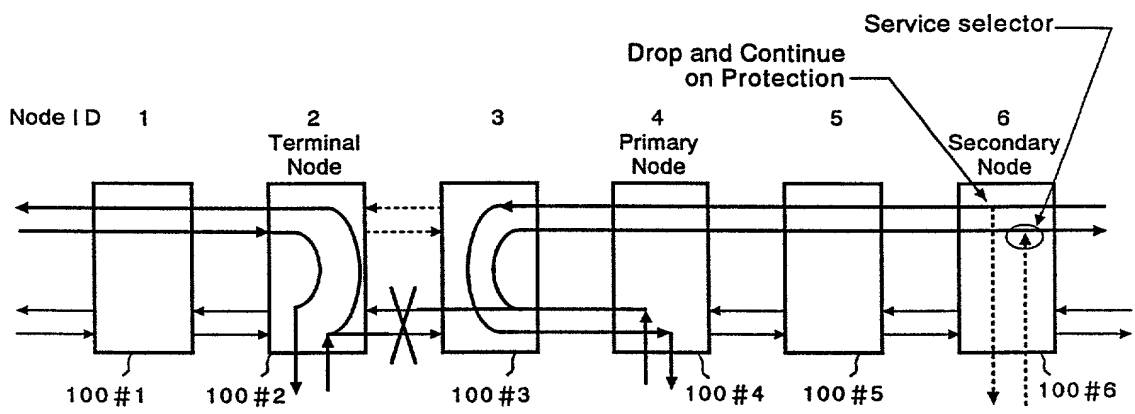


FIG. 32B

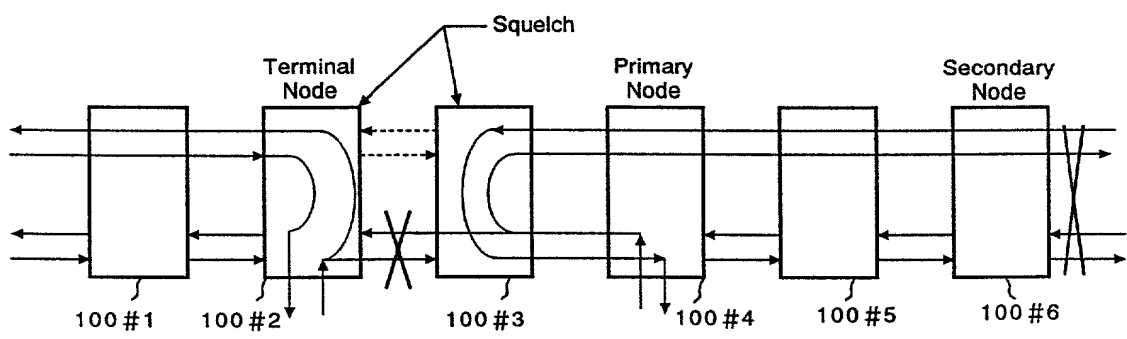


FIG. 32C

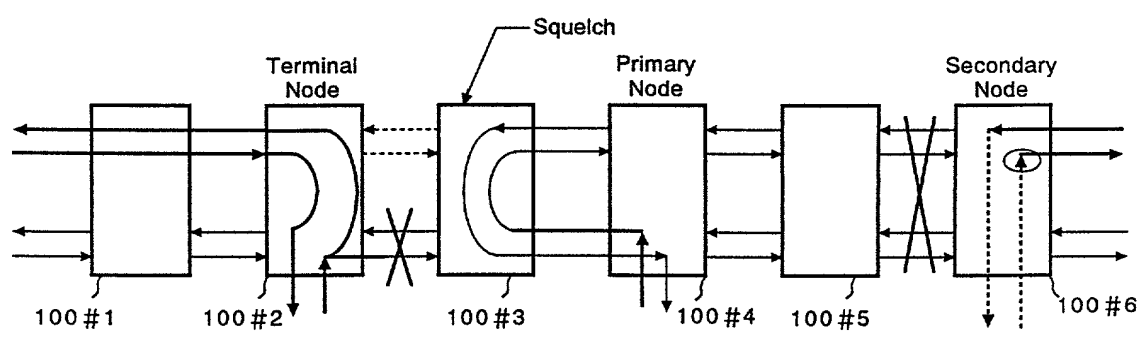


FIG. 33

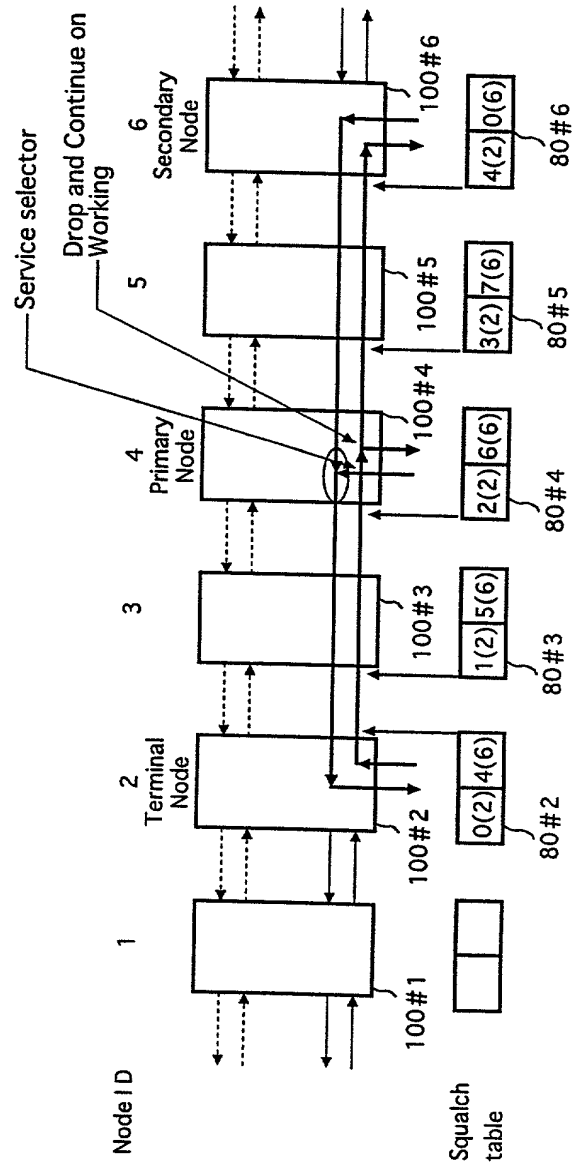


FIG. 34

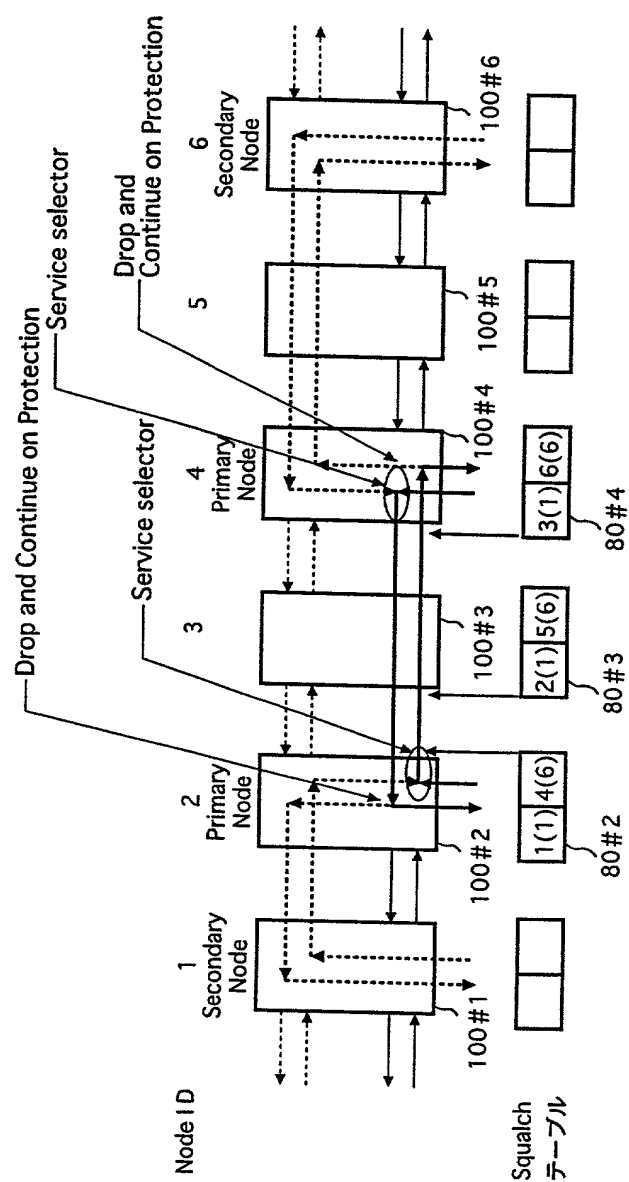




FIG. 39

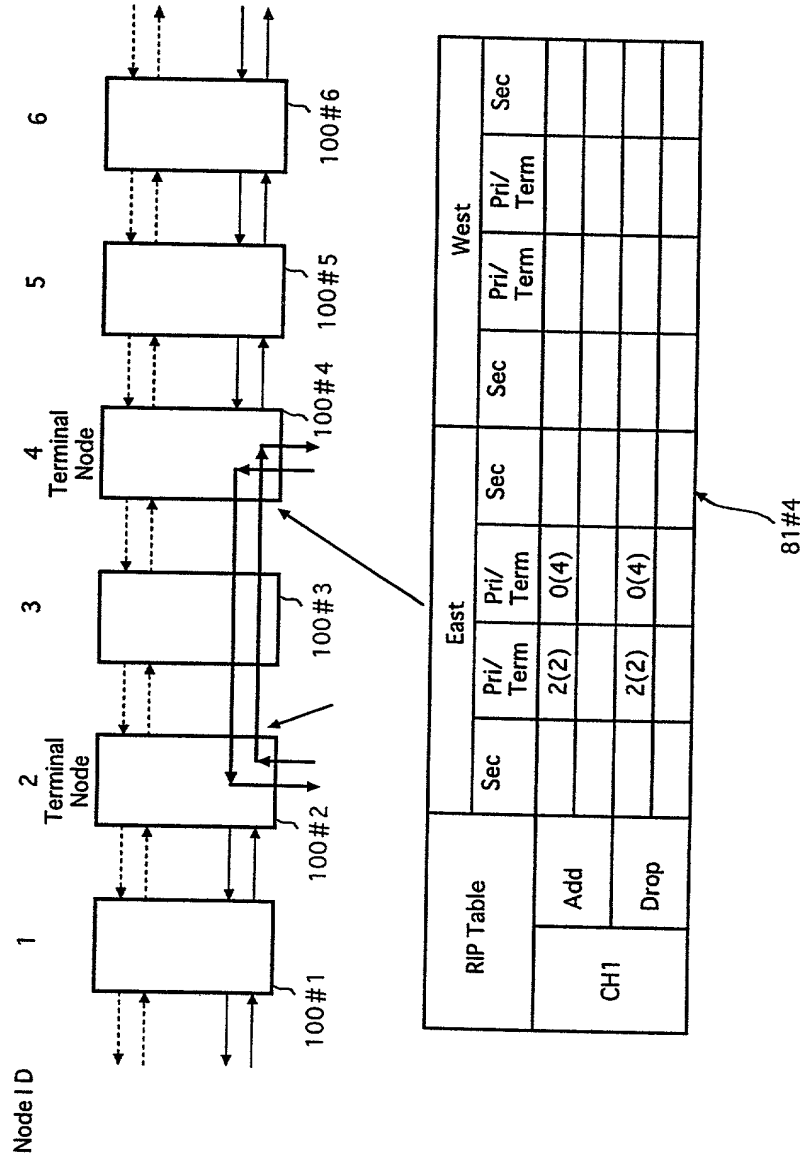


FIG. 40

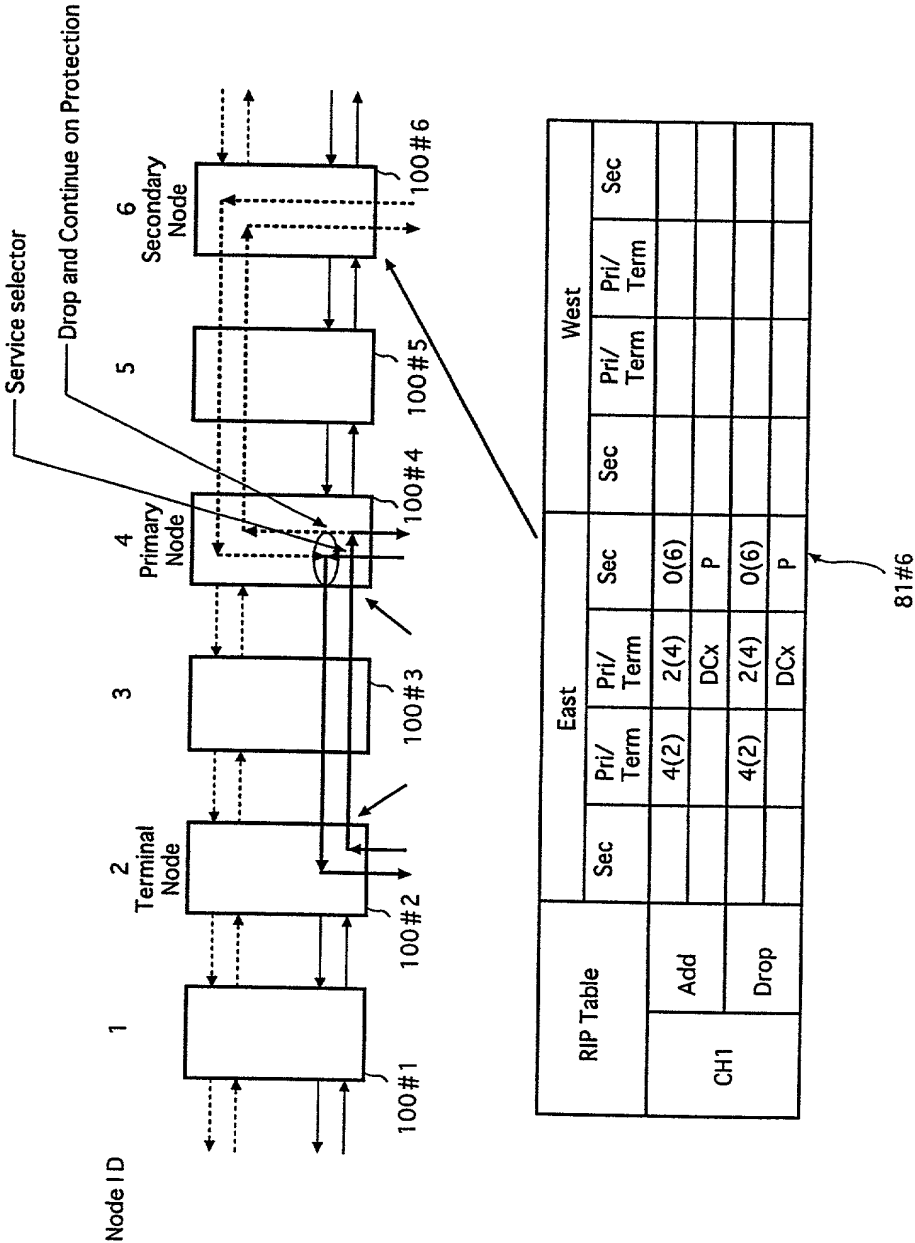


FIG. 41

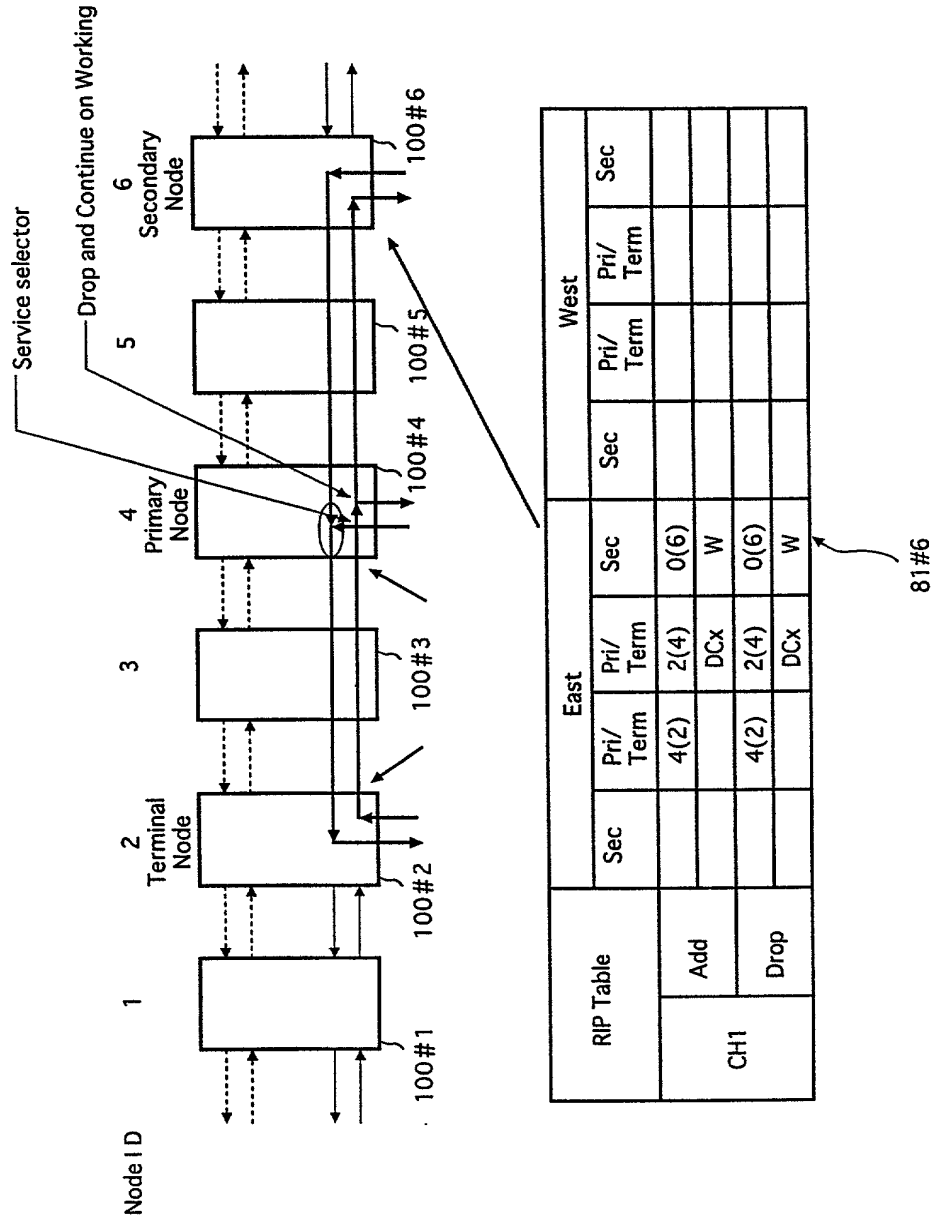
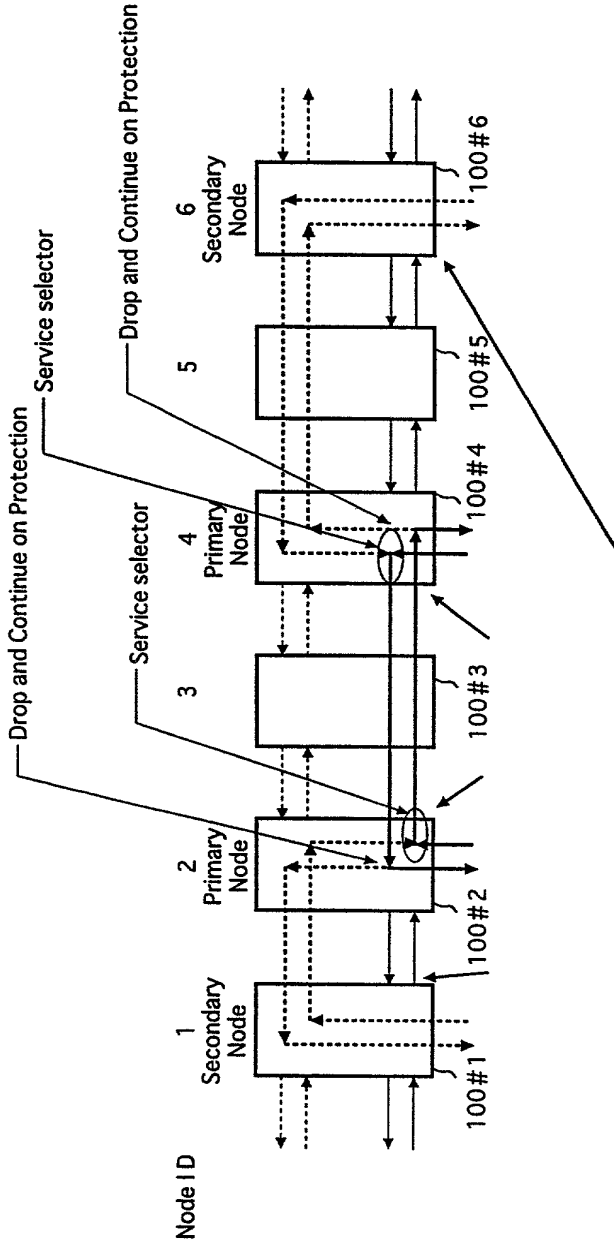


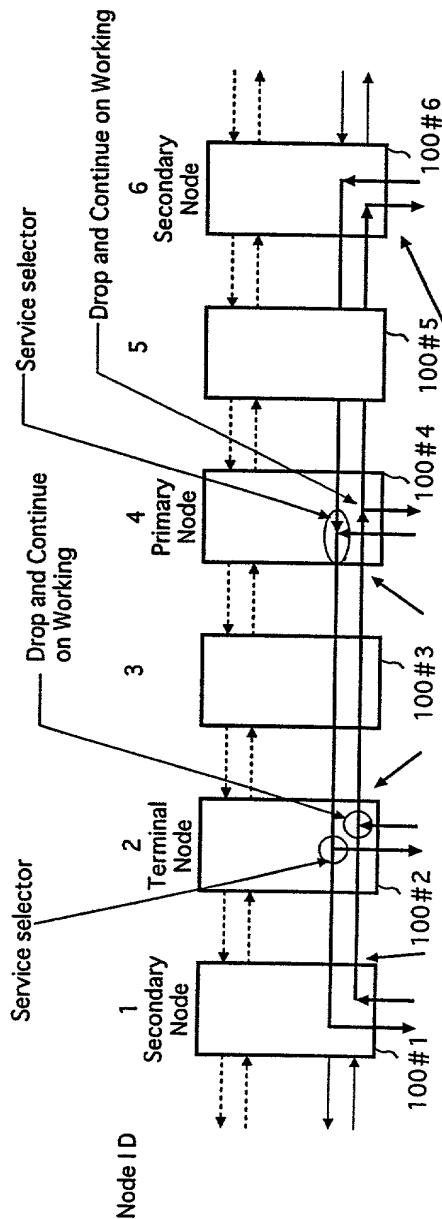
FIG. 42



RIP Table		East				West			
		Sec	Pri/ Term	Pri/ Term	Sec	Sec	Pri/ Term	Pri/ Term	Sec
CH1	Add	5(1) P	4(2) DCx	2(4) DCx	0(6) P				
	Drop	5(1) P	4(2) DCx	2(4) DCx	0(6) P				

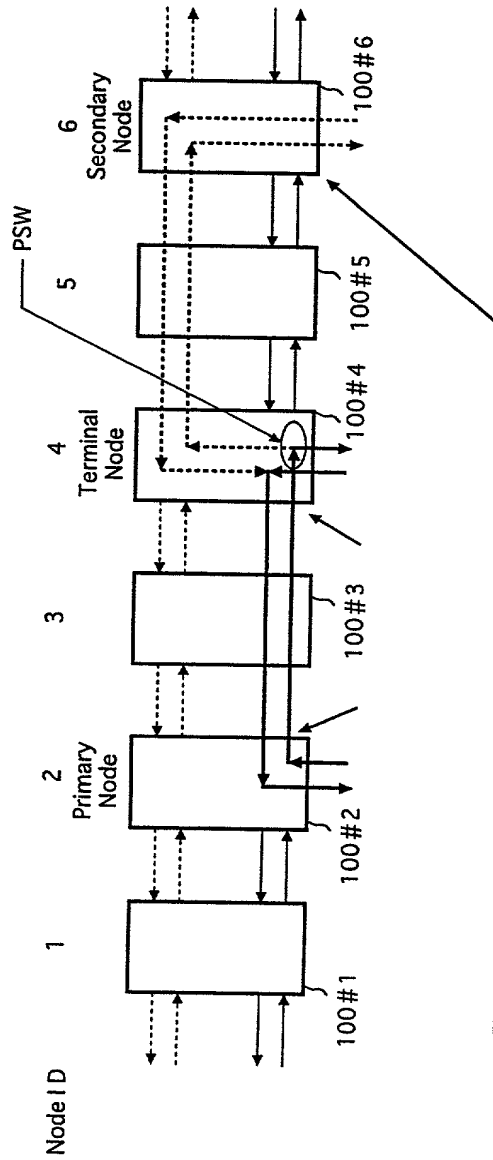
81#6

FIG. 43



RIP Table		East				West			
		Sec	Pri/ Term	Pri/ Term	Sec	Sec	Pri/ Term	Pri/ Term	Sec
CH1	Add	5(1) W	4(2) DCx	2(4) DCx	0(6) W				
	Drop	5(1) W	4(2) DCx	2(4) DCx	0(6) W				

FIG. 44



RIP Table		East			West		
		Sec	Pri/ Term	Sec	Sec	Pri/ Term	Sec
CH1	Add		4(2)	2(4)	0(6)		
	Drop			DT	P		
			4(2)	2(4)	0(6)		
				DT	P		

81#6

FIG. 45

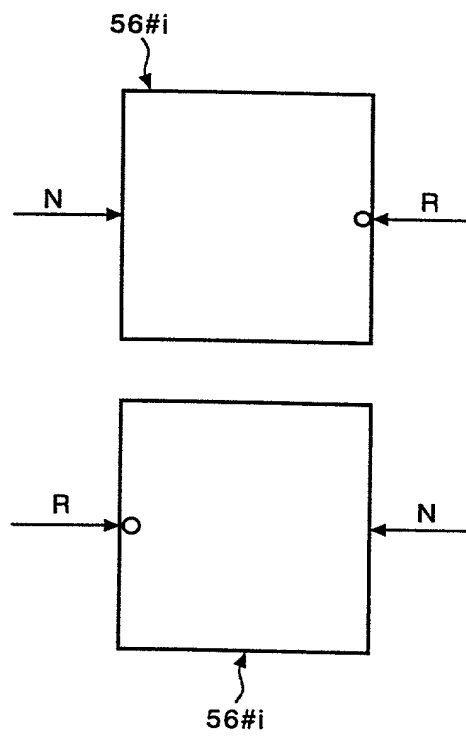


FIG. 46

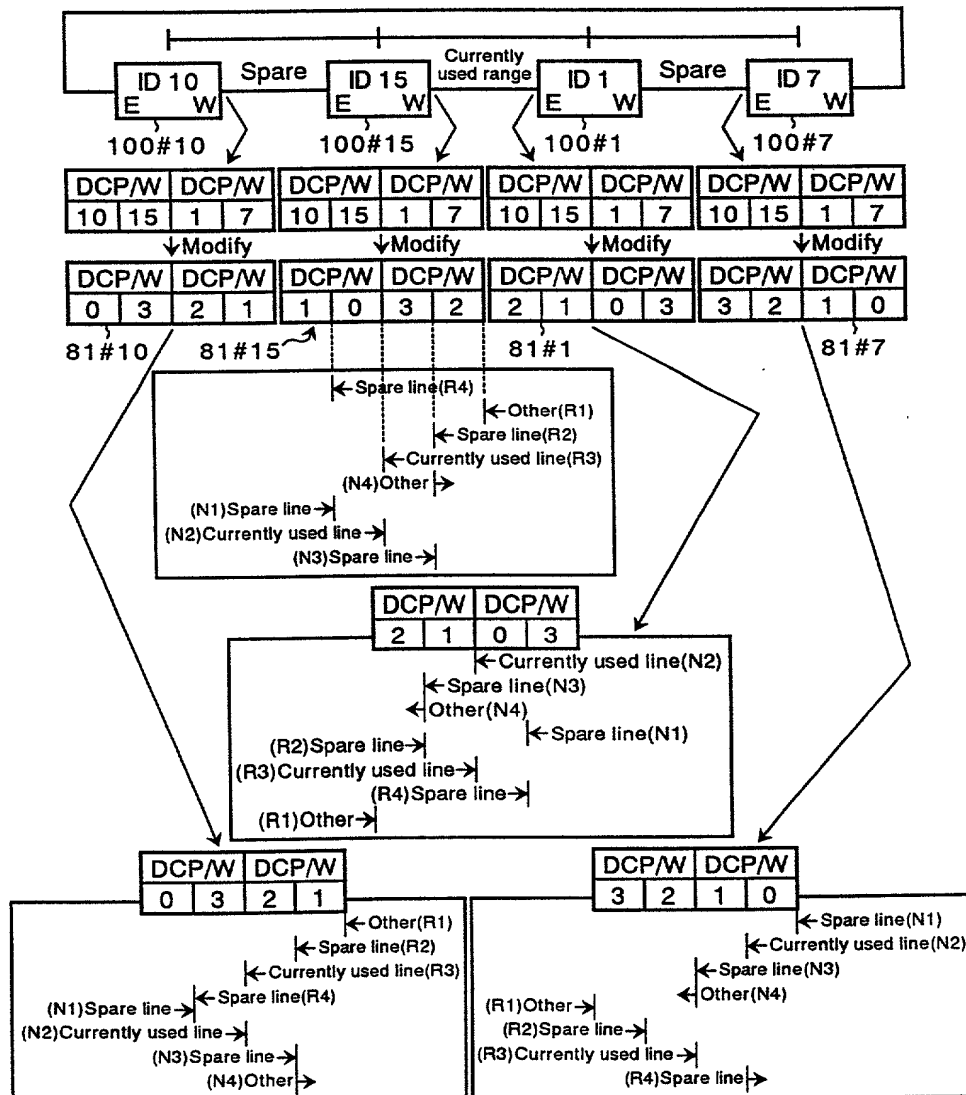


FIG. 47

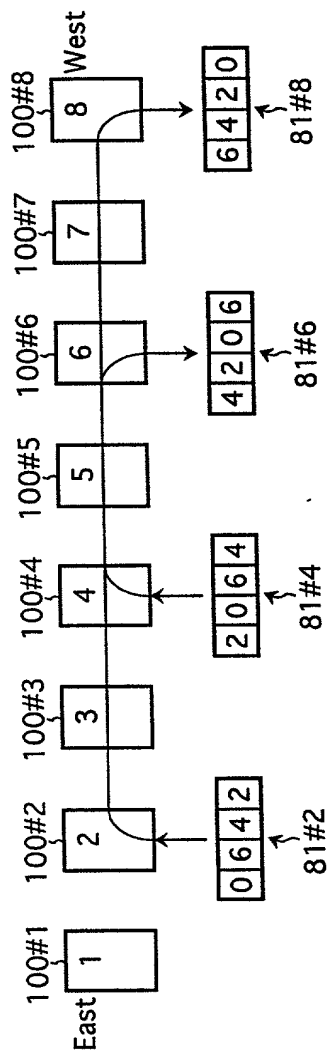


FIG. 48

	E-S	E-P	W-P	W-S
	4	2	0	6
0	T	T	F	T
1	T	T	F	T
2	T	F	F	T
3	T	F	F	T
4	F	F	F	T
5	F	F	F	T
6	F	F	F	F
7	F	F	F	F

E-S	E-P	W-P	W-S
6	4	2	0
T	T	T	F
T	T	T	F
T	T	F	F
T	T	F	F
T	F	F	F
T	F	F	F
F	F	F	F
F	F	F	F

(East ID < RIP)

FIG. 49

	E-S	E-P	W-P	W-S
	4	2	0	6
0	T	T	T	T
1	T	T	F	T
2	T	T	F	T
3	T	F	F	T
4	T	F	F	T
5	F	F	F	T
6	F	F	F	T
7	F	F	F	F

E-S	E-P	W-P	W-S
6	4	2	0
T	T	T	T
T	T	T	F
T	T	T	F
T	T	F	F
T	T	F	F
T	F	F	F
T	F	F	F
F	F	F	F

(West ID ≤ RIP)

FIG. 50

	ES	EP	WP	WS
	0	6	4	2
0	T	T	T	T
1	F	T	T	T
2	F	T	T	T
3	F	T	T	F
4	F	T	T	F
5	F	T	F	F
6	F	T	F	F
7	F	F	F	F

ES	EP	WP	WS
2	0	6	4
T	T	T	T
T	F	T	T
T	F	T	T
F	F	T	T
F	F	T	T
F	F	T	F
F	F	T	F
F	F	F	F

(West ID \leq RIP)

FIG. 51

	ES	EP	WP	WS
	0	6	4	2
0	F	T	T	T
1	F	T	T	T
2	F	T	T	F
3	F	T	T	F
4	F	T	F	F
5	F	T	F	F
6	F	F	F	F
7	F	F	F	F

ES	EP	WP	WS
2	0	6	4
T	F	T	T
T	F	T	T
F	F	T	T
F	F	T	T
F	F	T	F
F	F	T	F
F	F	F	F
F	F	F	F

(East ID < RIP)

FIG. 52A

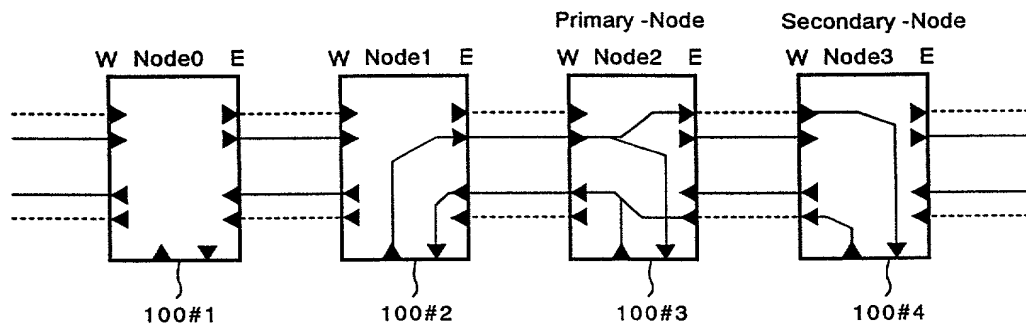


FIG. 52B

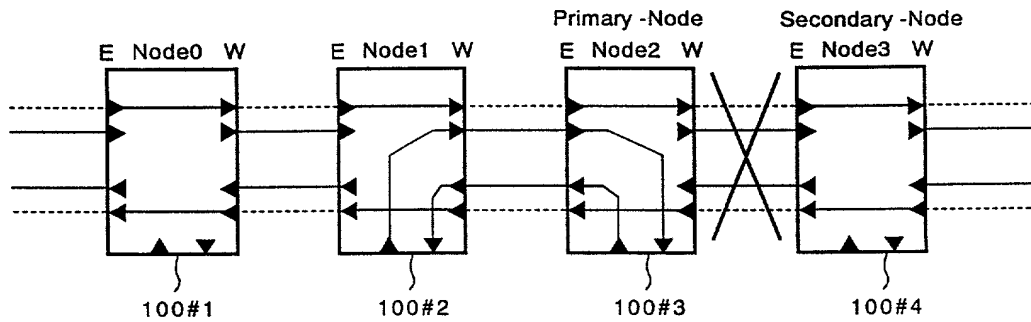


FIG. 53A

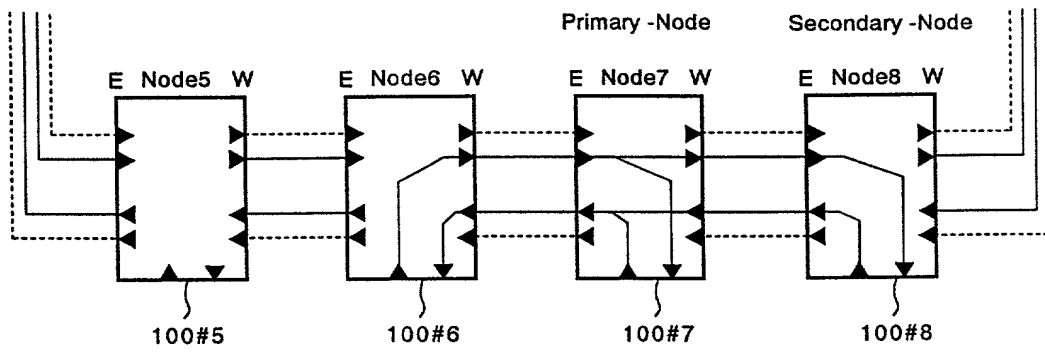


FIG. 53B

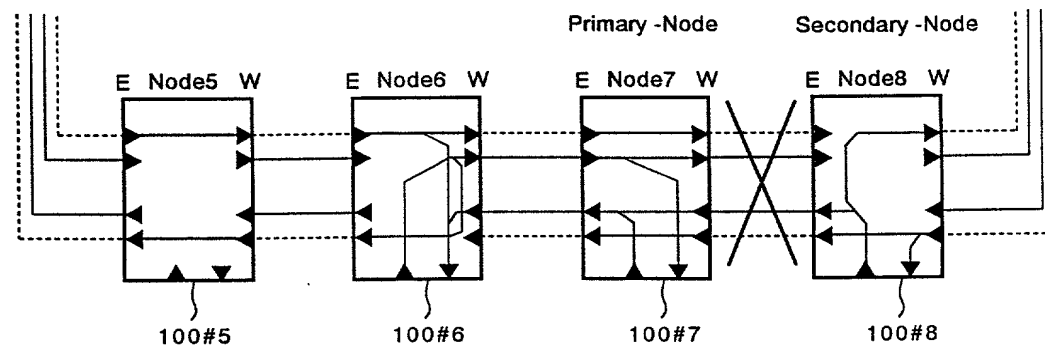


FIG. 54

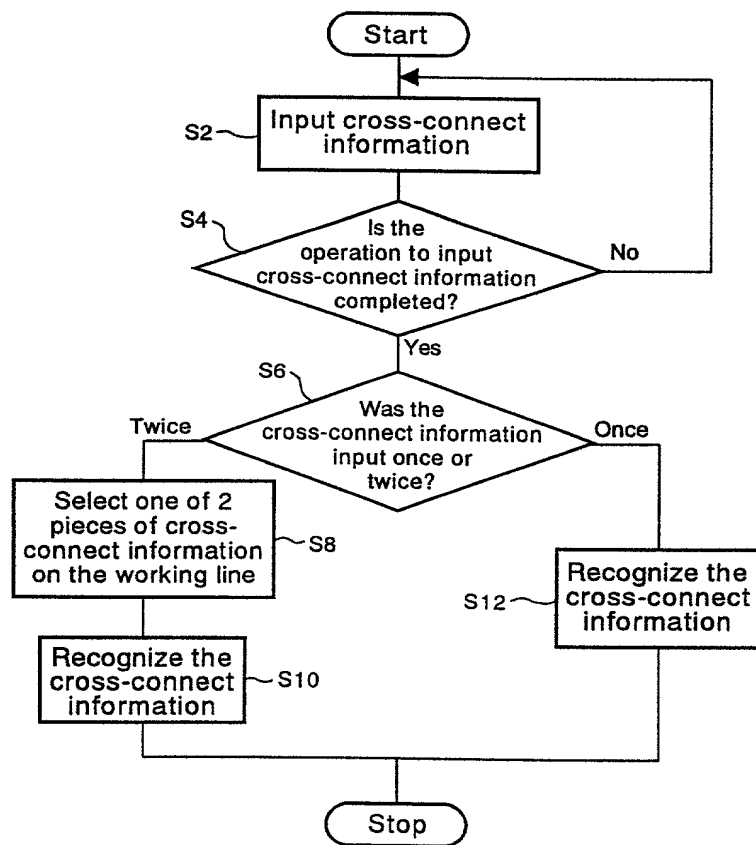


FIG. 55

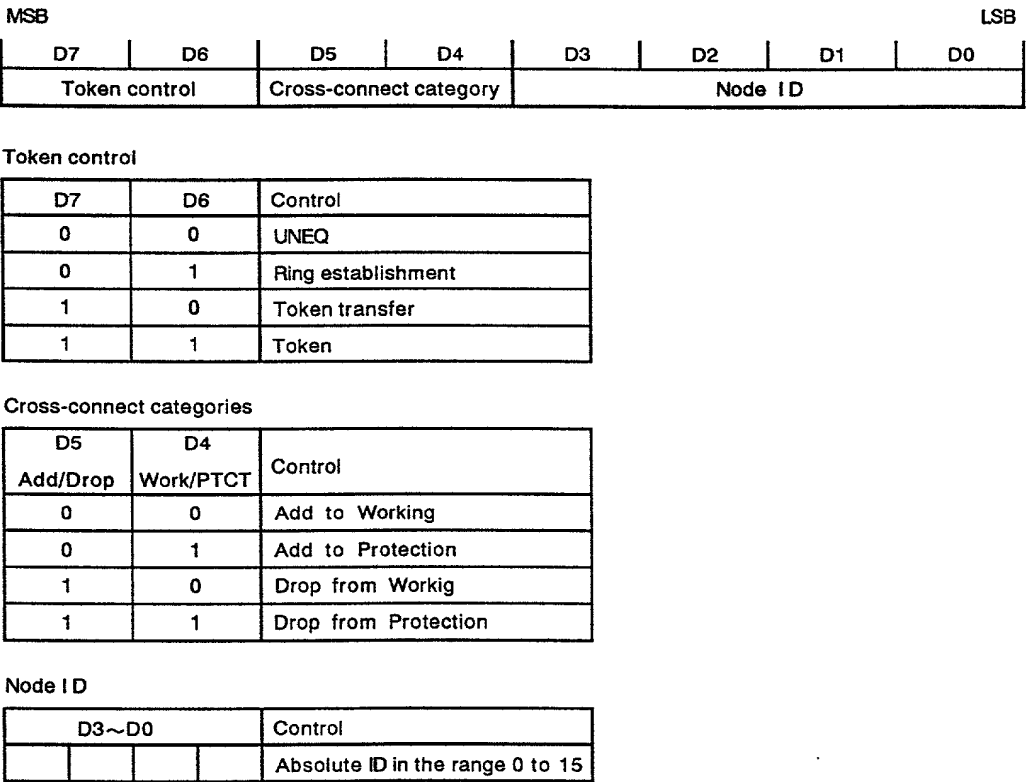
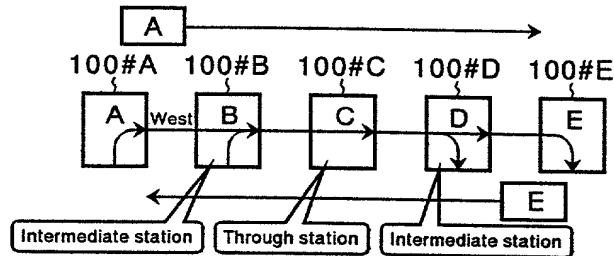
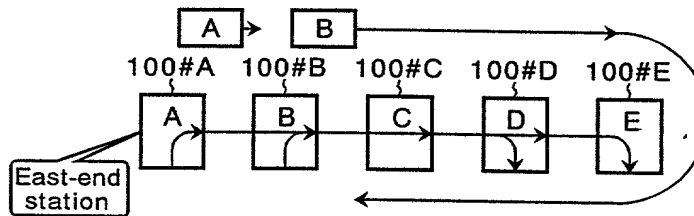


FIG. 56

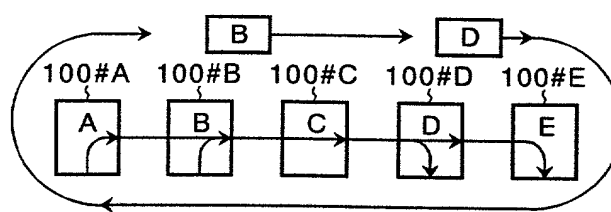
- (1) An end station transmits a communication-path-establishing code



- (2) The east-end station hands over a transmission right to an intermediate station and the intermediate station transmits data



- (3) The intermediate station hands over a transmission right to the next intermediate station and the next intermediate station transmits the data



- (4) The west-end station receives the transmission right and the transmission of the data is completed

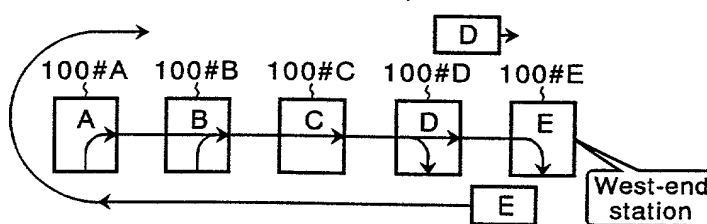


FIG. 58

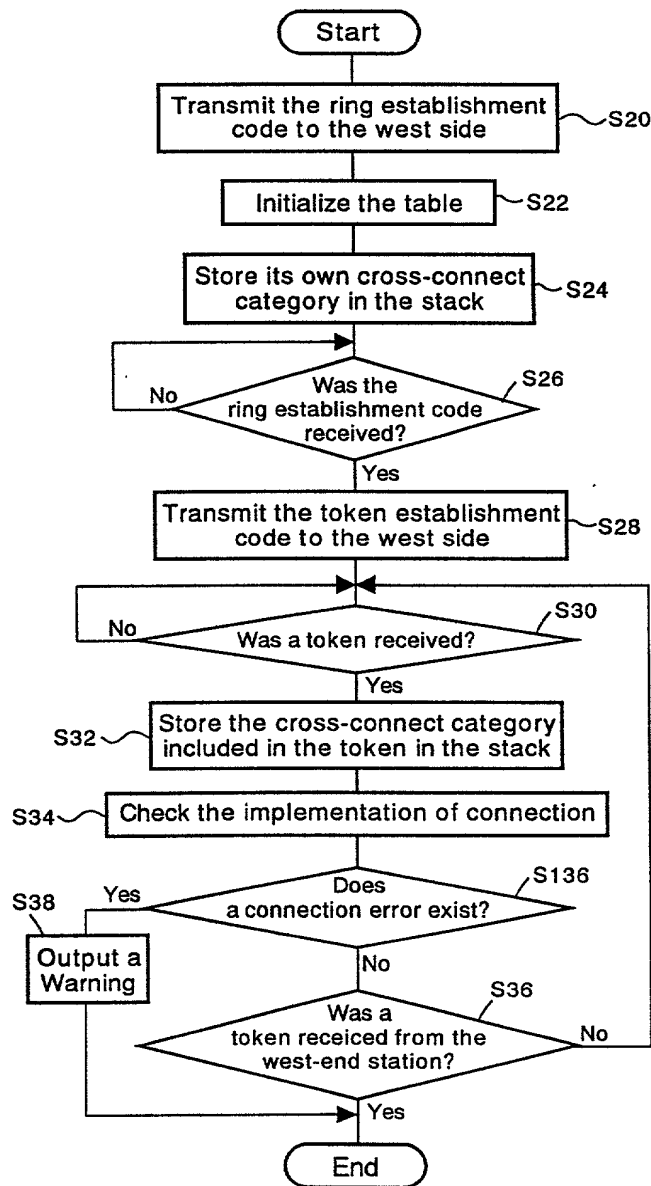


FIG. 59

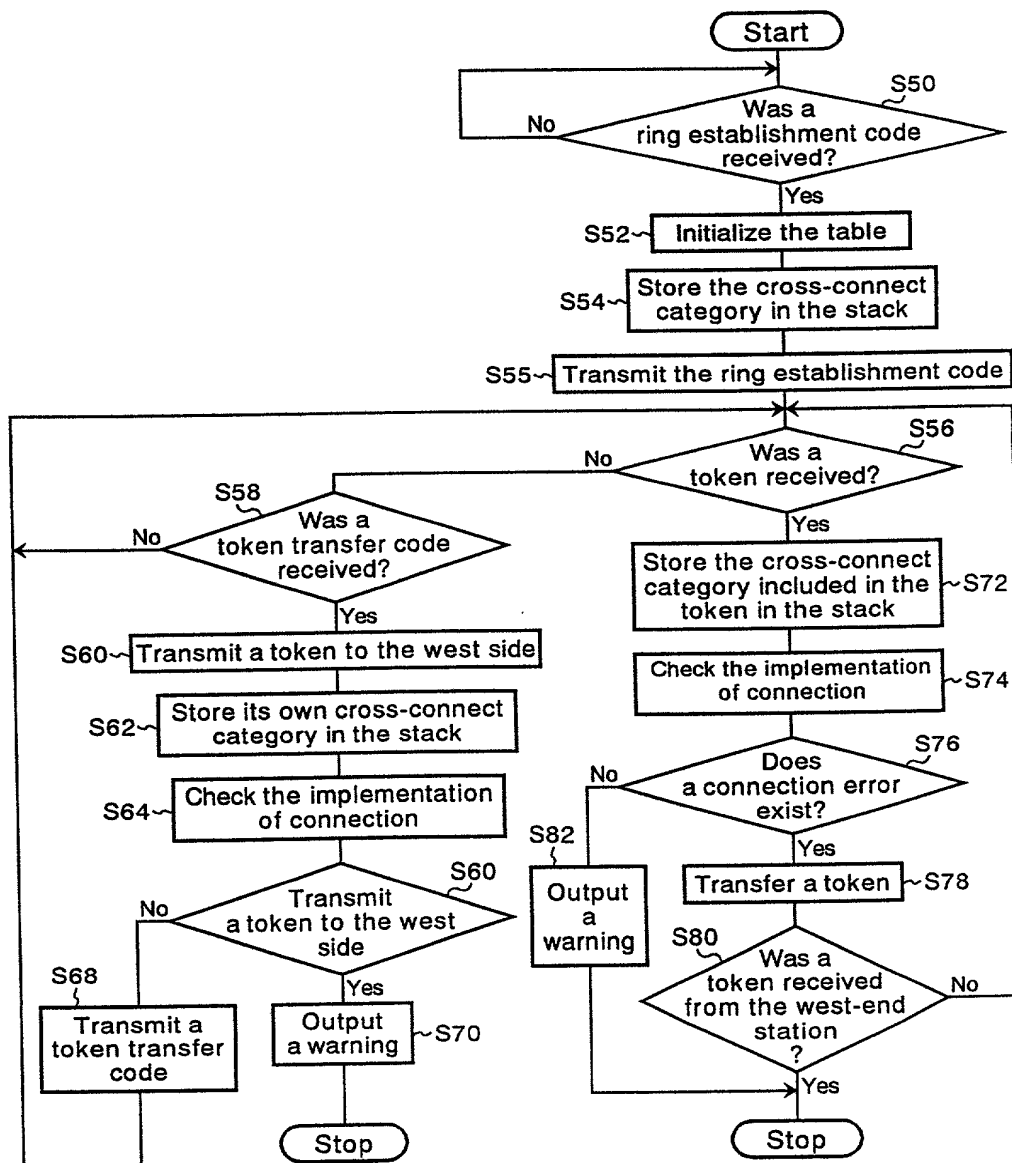


FIG. 60

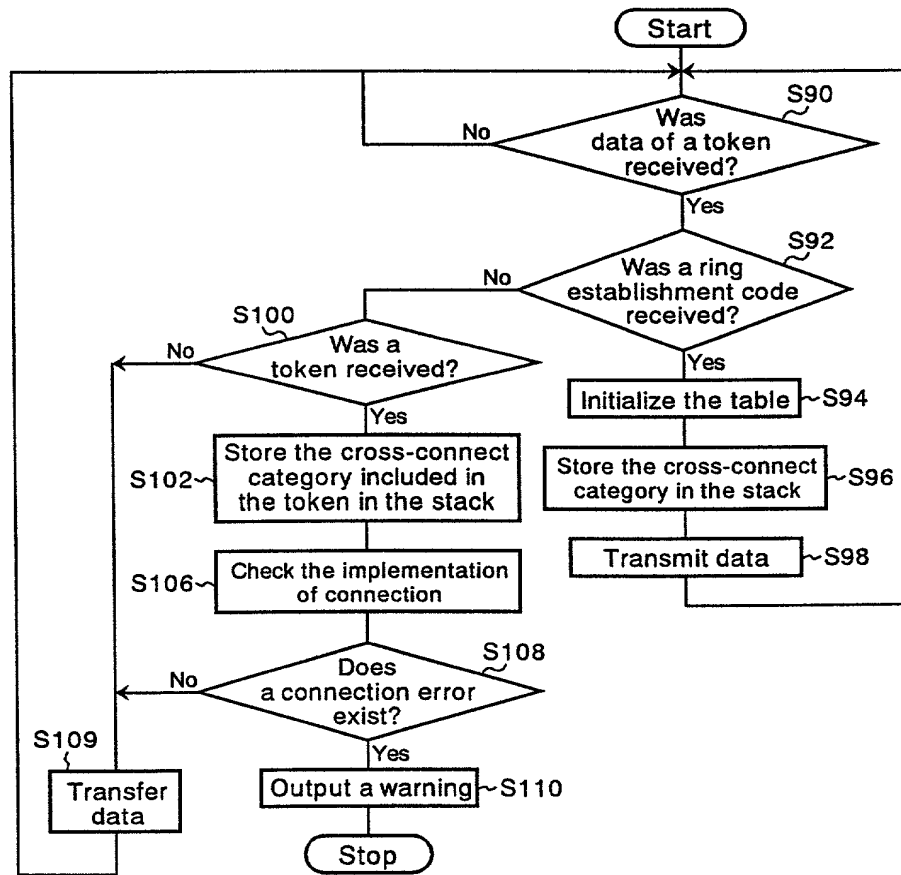


FIG. 61

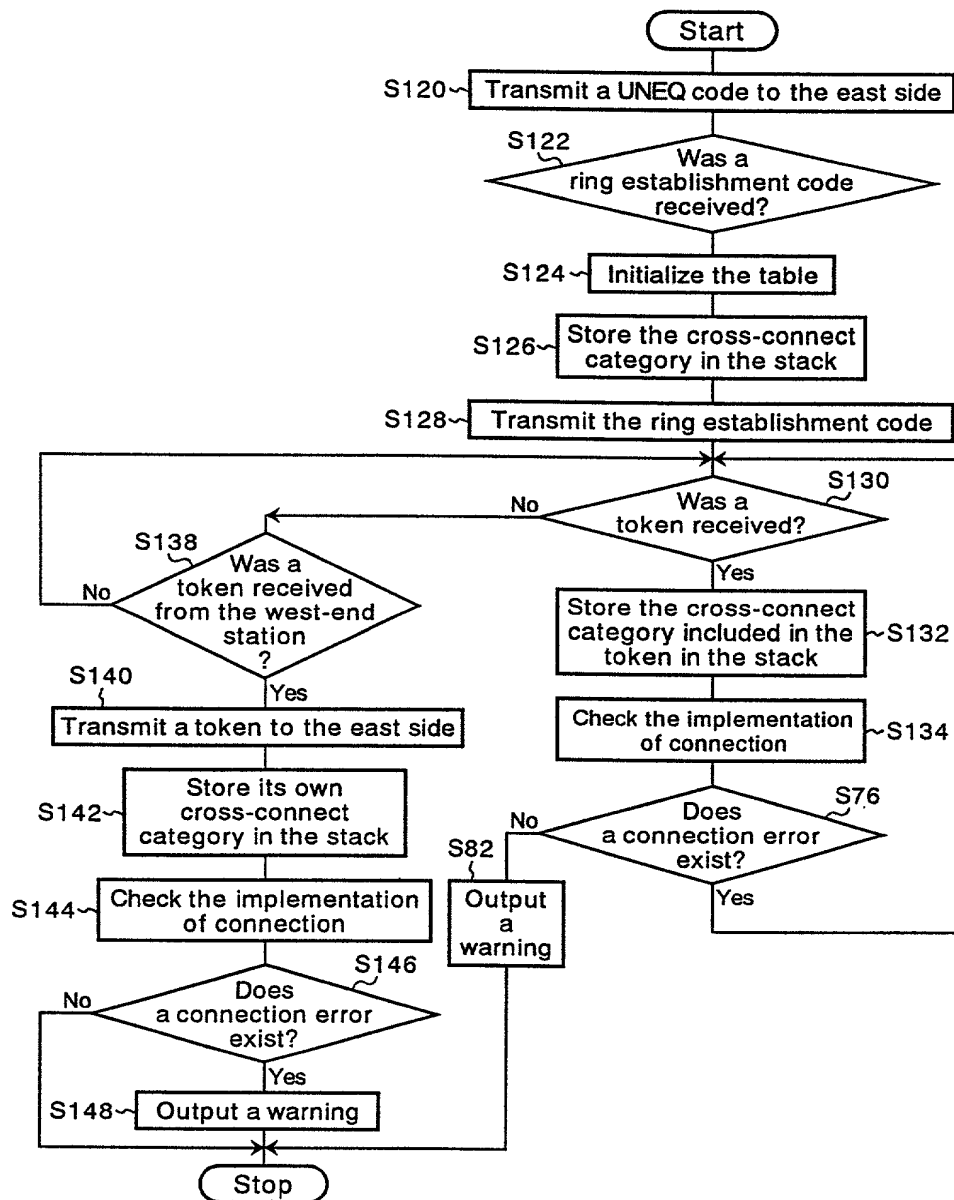
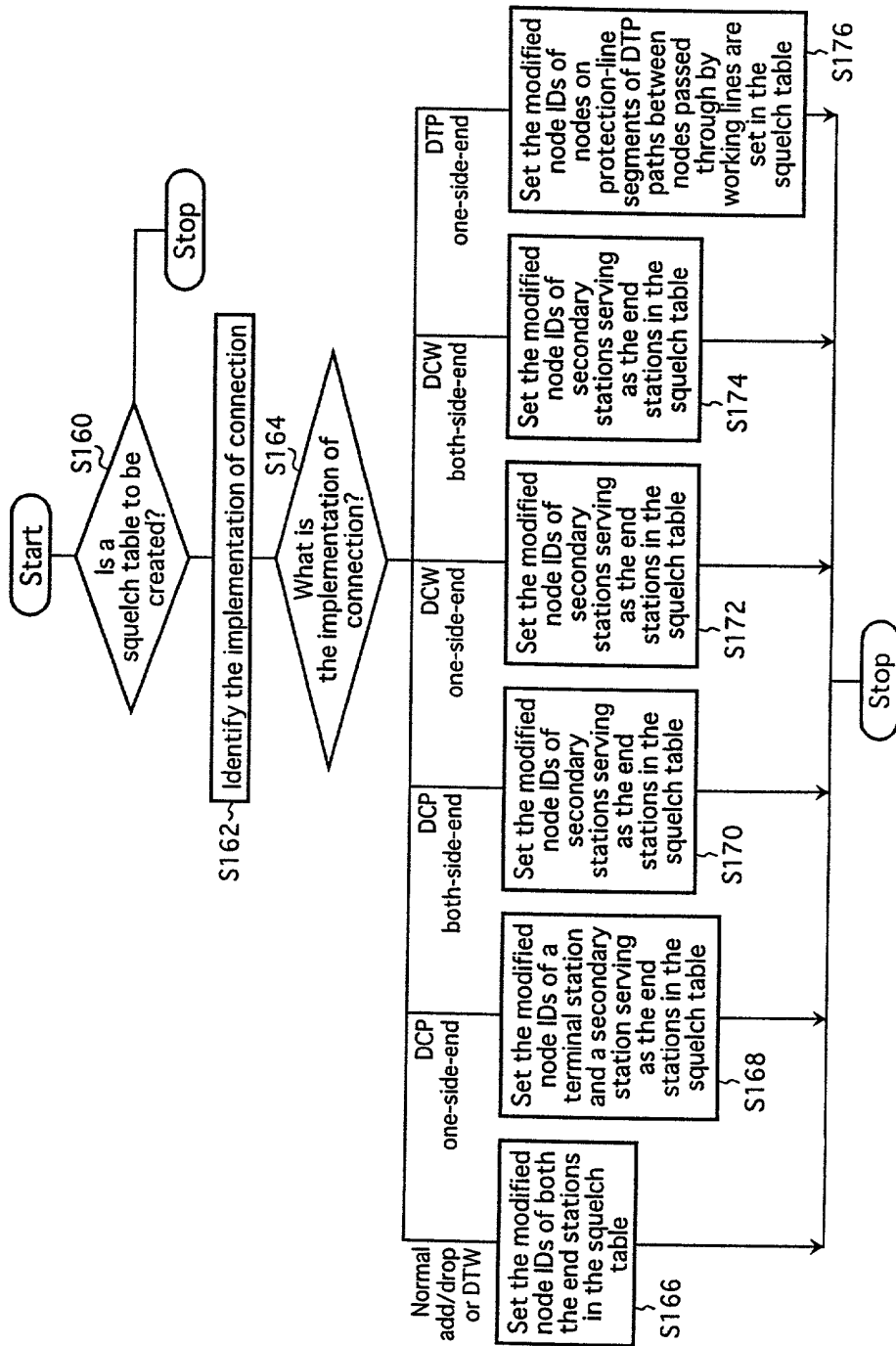


FIG. 62



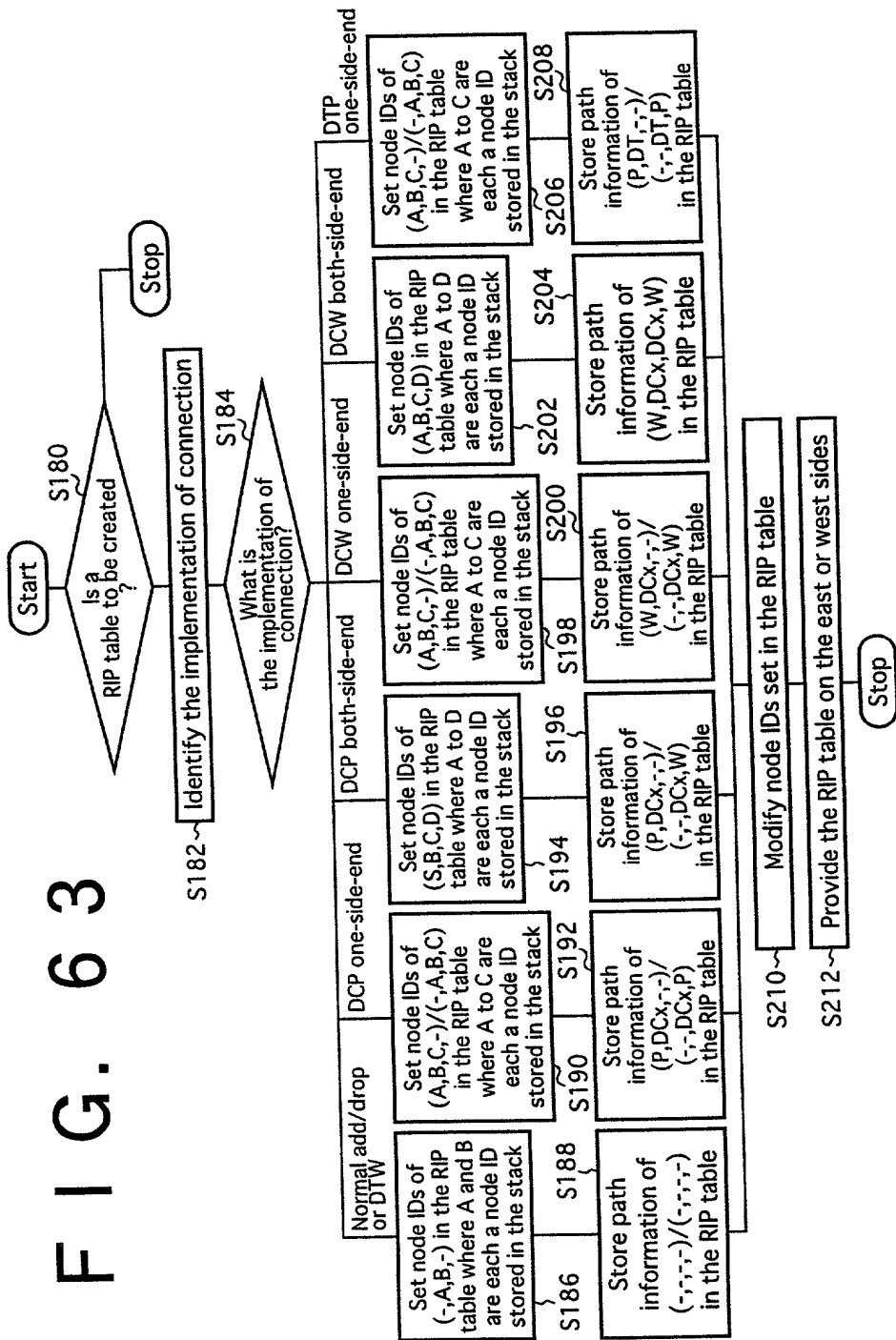


FIG. 64

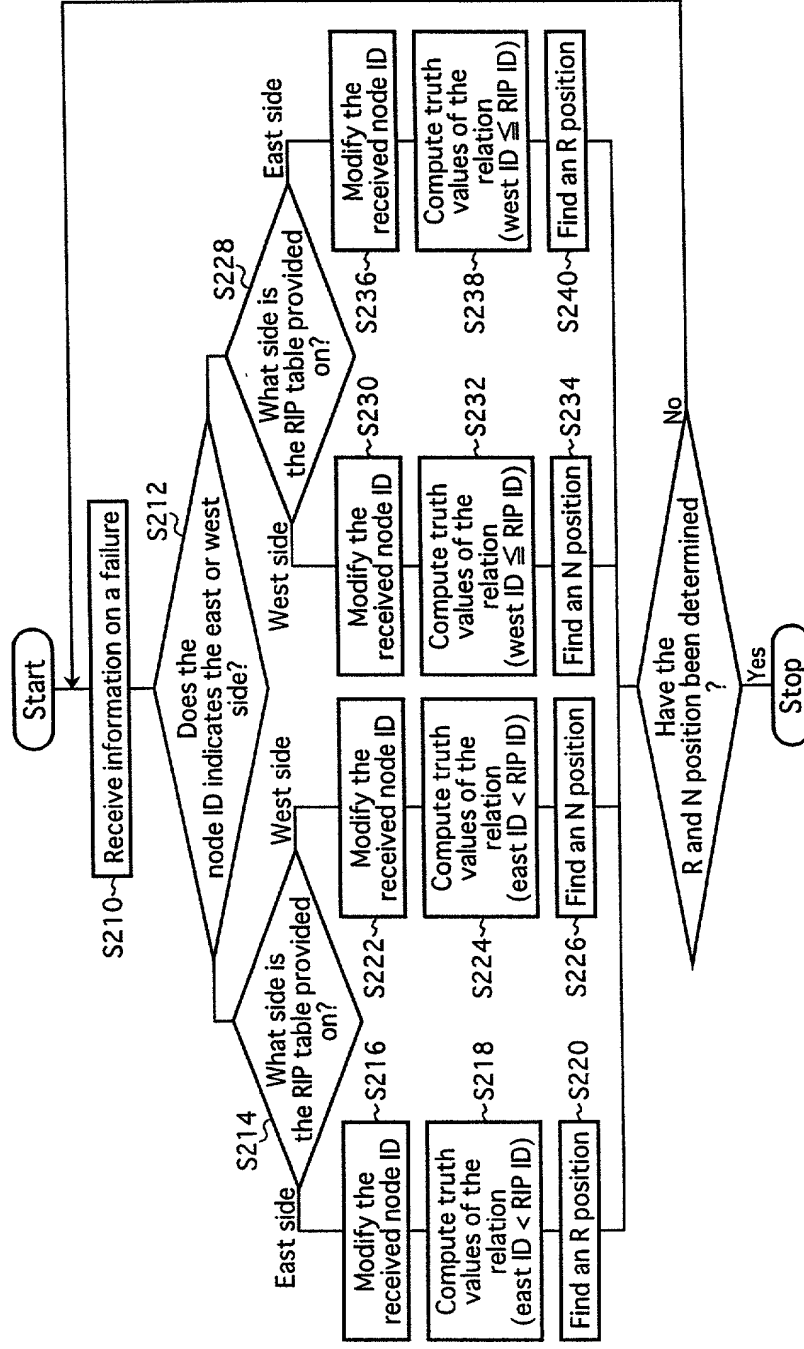


FIG. 65

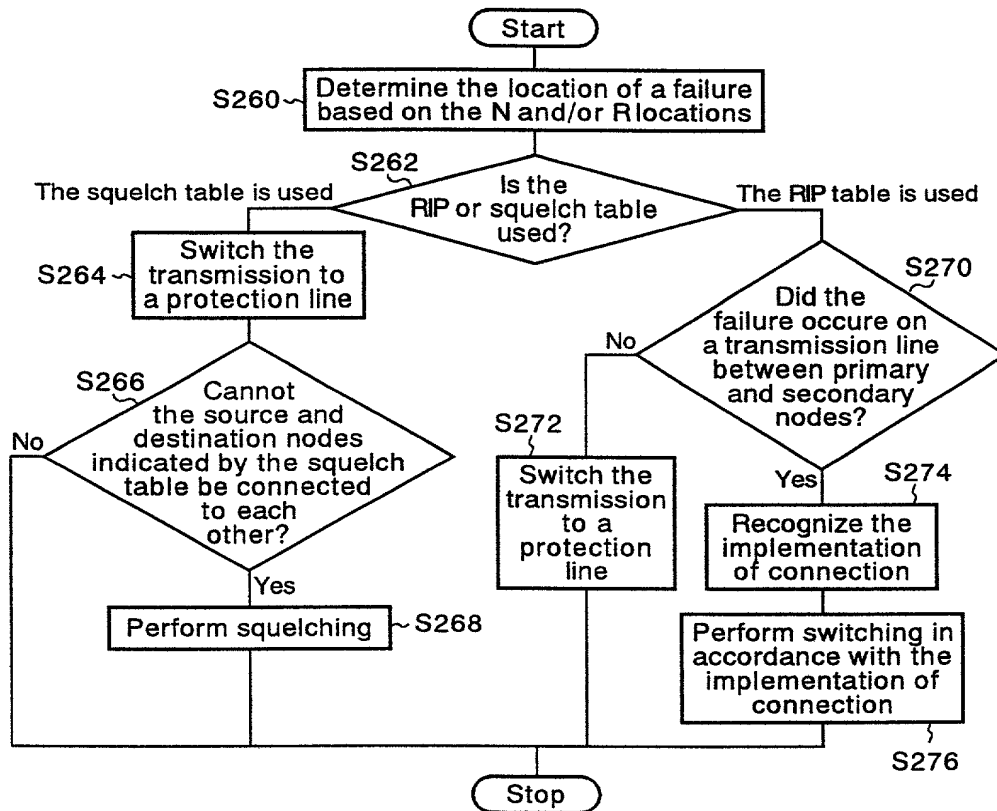


FIG. 66A

Initial state : A state with the table completed

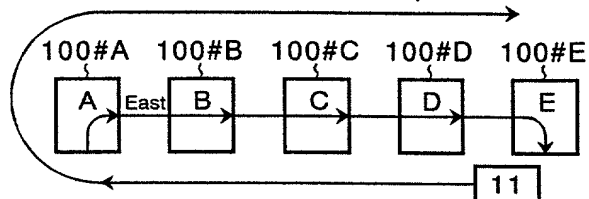


FIG. 66B

A cross connect was added to a B station, resulting in a changed configuration.
The B station transmits all 0s in both the directions.

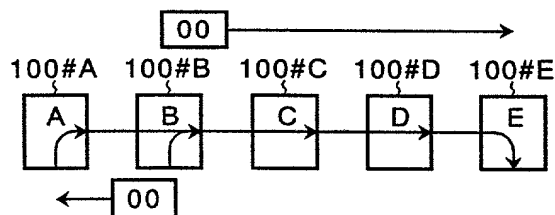


FIG. 66C

When an end station receives a UNEQ code of 00, reconstruction is started.
The east-end and west-end stations transmit a ring establishment code of 01. (Procedure 1)

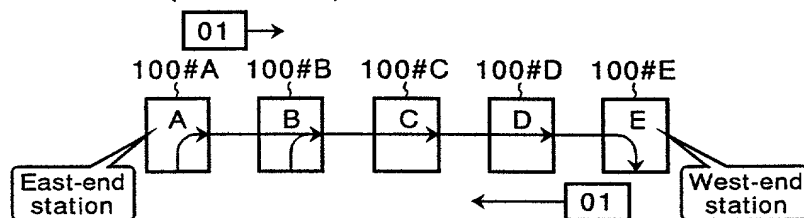


FIG. 66D

The B station outputting the UNEQ code passes through data as requested by the A station. (Procedure 2)

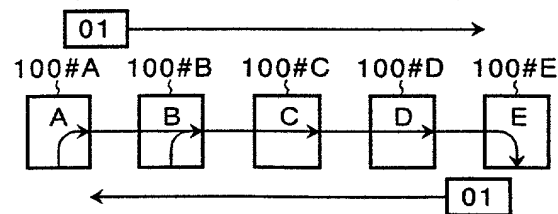


FIG. 67

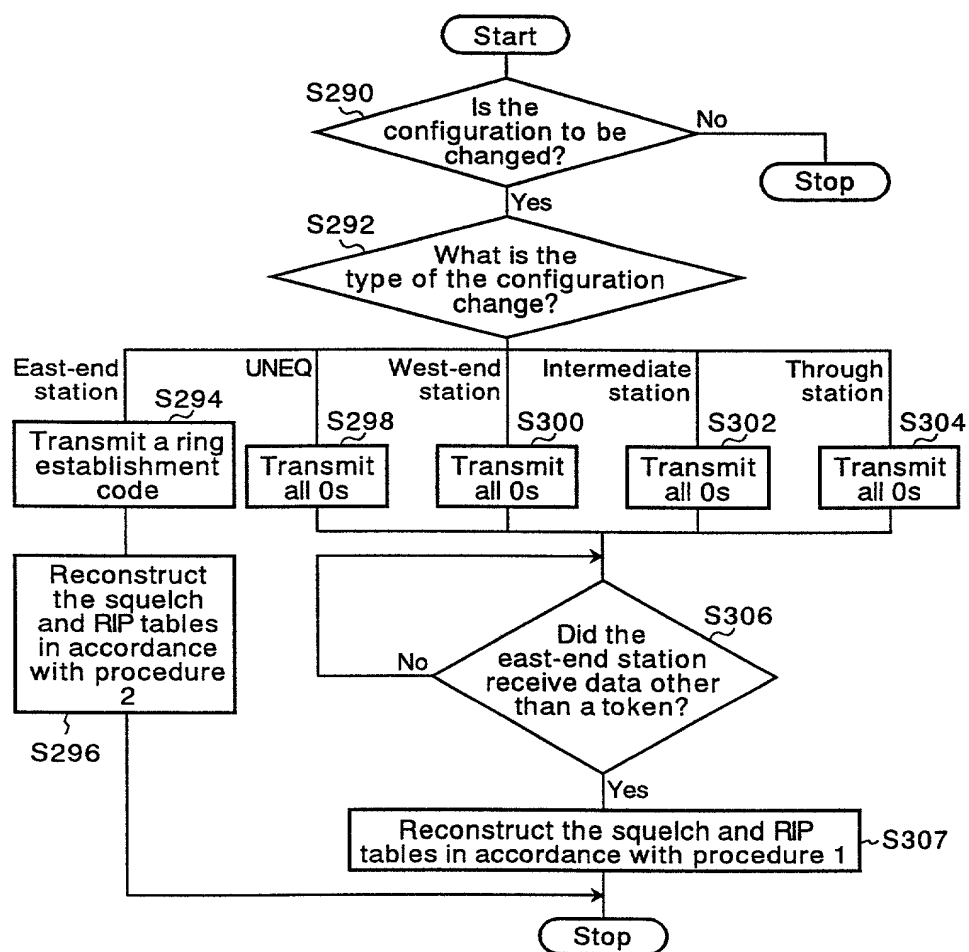


FIG. 67